ExProfile^{TM} Human JAK/STAT Signaling Related Gene qPCR Array

For focused group profiling of human JAK/STAT signaling related gene expression

Cat. No. QG034-A (1 x 96-well plate, Format A)
Cat. No. QG034-B (1 x 96-well plate, Format B)
Cat. No. QG034-C (1 x 96-well plate, Format C)
Cat. No. QG034-D (1 x 96-well plate, Format D)
Cat. No. QG034-E (1 x 96-well plate, Format E)

Plates available individually or as a set of 6. Each set contains 84 unique gene primer pairs deposited in one 96-well plate.

Introduction

The ExProfile human JAK/STAT signaling related gene qPCR array profiles the expression of 84 human genes related to JAK/STAT-mediated signal transduction. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications. This array allows researchers to study pathway-related genes to gain understanding of their roles in the JAK/STAT signaling pathway.

- QG034 plate 01: 84 unique gene PCR primer pairs

Shipping and storage conditions

Shipped at room temperature
Stable for at least 6 months when stored at -20℃

Array format

GeneCopoeia provides five qPCR array formats (A, B, C, D, and E) suitable for use with the following real-time cyclers.

Important note: Upon receipt, please check to make sure that the correct array format was ordered to ensure compatibility with your qPCR instrument.

Plate format	Instrument provider	qPCR instrument model
A (96-well)	Applied Biosystems	5700, 7000, 7300, 7500, 7700, 7900HT (Standard 96-well block), ViiA^{TM}7 (Standard 96-well block)
B (96-well)	Applied Biosystems	7500 (Fast block), 7900HT (Fast block), StepOnePlus^{TM}, ViiA^{TM}7 (Fast block)
C (96-well)	Bio-Rad Laboratories	iCycler iQ®, MyiQ™, iQ™5
D (96-well)	Bio-Rad Laboratories	CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™
E (96-well)	Roche Applied Science	LightCycler® 480 (96-well block)

Quality control

1. Each pair of primers in the ExProfile gene qPCR array has been experimentally validated to yield a single dissociation curve peak and to generate a single amplicon of the correct size for the targeted gene.

2. The positive PCR controls (PCR) have been verified to amplify a single amplicon of the correct size with Ct values around **20±2**.

3. The Spike-in reverse transcription controls (RT) have been verified to amplify a single amplicon of the correct size with Ct values around **20±3**.

4. $R^2 > 0.99$ was observed for high inter/ intra-array reproducibility.

Materials required but not provided

All-in-One™ First-Strand cDNA Synthesis Kit
All-in-One™ qPCR Mix
Total RNA extraction kit (RNAzol® RT RNA extraction reagent is recommended)
DNase/RNase free tips, PCR reaction tubes, 1.5 ml microcentrifuge tubes
5 ml and 10 ml graduated pipettes, beakers, flasks, and cylinders
10 µl to 1,000 µl adjustable single channel micropipettes with disposable tips
5 µl to 20 µl adjustable multichannel micropipette, disposable tips, and reservoir
qPCR instrument, compatible with gene qPCR arrays ordered

Array layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	A2M	SH2B2	BCL2L1	CCND1	CDKN1A	CRK	CRP	CSF1R	CSF2RB	CXCL9	EGFR	EPOR
B	F2	F2R	FAS	FCER1A	FCGR1A	ISG15	GATA3	GBP1	GHR	IFNAR1	IFNG	IFNGR1
C	IL10RA	IL20	IL2RA	IL2RG	IL4	IL4R	IL6ST	INSR	IRF1	JAK1	JAK2	JAK3
D	JUN	JUNB	MMP3	MPL	MYC	NFKB1	NOS2A	NR3C1	OAS1	PDGFRA	PIAS1	PIAS2
E	PPP2R1A	PRLR	PTPN1	PTPRC	SLA2	SMAD1	SMAD2	SMAD3	SMAD4	SMAD5	SOCS1	SOCS2
F	SOCS3	SOCS4	SOCS5	SP1	SPI1	SRC	STAM	STAT1	STAT2	STAT3	STAT4	STAT5A
G	STAT5B	STAT6	TYK2	YY1	HPRT1	FAS	IL6ST	PTPRC	STAT3	CEBPB	OSM	STUB1
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG034 plate 01

- **Gene primer pairs**: 84 wells (A row to G row) are designated for a real-time PCR assay for genes (see the primer list).

- **HK1-6**: Six pre-deposited housekeeping gene (HK1-6) primer pairs, which can be used as endogenous positive controls as well as for array normalization.

- **GDC**: Genomic DNA controls, which can be used to specifically detect genomic DNA contamination with a high level of sensitivity.

- **RT**: Spike-in reverse transcription controls, which can be used to monitor the efficiency of the RT reactions. These pre-deposited primer pairs specifically amplify the cDNA template reverse transcribed from the spike-in control RNA in the sample.

- **PCR**: Positive PCR controls, which are used to verify the PCR efficiency by amplifying the pre-deposited DNA template with its specific pre-deposited primer pairs.

Gene primer list

Plate	Position	Catalog No. of Primer	Accession No. of Gene	Symbol
QG034-01	A01	HQP008678	NM_000014	A2M
QG034-01	A02	HQP000726	NM_020979	SH2B2
QG034-01	A03	HQP016238	NM_138578	BCL2L1
QG034-01	A04	HQP016204	NM_053056	CCND1
QG034-01	A05	HQP000331	NM_000389	CDKN1A
QG034-01	A06	HQP002988	NM_016823	CRK
QG034-01	A07	HQP002994	NM_000567	CRP
QG034-01	A08	HQP003158	NM_005211	CSF1R
QG034-01	A09	HQP003170	NM_000395	CSF2RB
QG034-01	A10	HQP011220	NM_002416	CXCL9
QG034-01	A11	HQP004605	NM_005228	EGFR
QG034-01	A12	HQP004958	NM_000121	EPOR
QG034-01	B01	HQP005052	NM_000506	F2
QG034-01	B02	HQP005053	NM_001992	F2R
QG034-01	B03	HQP009651	NM_000043	FAS
QG034-01	B04	HQP005238	NM_002001	FCER1A
QG034-01	B05	HQP005251	NM_000566	FCGR1A
QG034-01	B06	HQP023013	NM_005101	ISG15
QG034-01	B07	HQP007166	NM_002051	GATA3
QG034-01	B08	HQP007221	NM_002053	GBP1
QG034-01	B09	HQP007395	NM_000163	GHR
QG034-01	B10	HQP009458	NM_000629	IFNAR1
QG034-01	B11	HQP009467	NM_000619	IFNG
QG034-01	B12	HQP009469	NM_000416	IFNGR1
QG034-01	C01	HQP009686	NM_001558	IL10RA
QG034-01	C02	HQP012157	NM_018724	IL20
QG034-01	C03	HQP009650	NM_000417	IL2RA
QG034-01	C04	HQP009659	NM_000206	IL2RG
QG034-01	C05	HQP009662	NM_000589	IL4
QG034-01	C06	HQP009664	NM_000418	IL4R
QG034-01	C07	HQP009674	NM_002184	IL6ST
QG034-01	C08	HQP009764	NM_000208	INSR
QG034-01	C09	HQP009778	NM_002198	IRF1
QG034-01	C10	HQP009849	NM_002227	JAK1
QG034-01	C11	HQP009850	NM_004972	JAK2
QG034-01	C12	HQP009851	NM_000215	JAK3
QG034-01	D01	HQP009853	NM_002228	JUN
QG034-01	D02	HQP009854	NM_002229	JUNB
QG034-01	D03	HQP011257	NM_002422	MMP3
QG034-01	D04	HQP011308	NM_005373	MPL
QG034-01	D05	HQP011597	NM_002467	MYC

QG034-01	D06	HQP011807	NM_003998	NFKB1
QG034-01	D07	HQP011866	NM_000625	NOS2A
QG034-01	D08	HQP008401	NM_000176	NR3C1
QG034-01	D09	HQP011984	NM_002534	OAS1
QG034-01	D10	HQP012866	NM_006206	PDGFRA
QG034-01	D11	HQP021271	NM_016166	PIAS1
QG034-01	D12	HQP022005	NM_004671	PIAS2
QG034-01	E01	HQP014147	NM_014225	PPP2R1A
QG034-01	E02	HQP015027	NM_000949	PRLR
QG034-01	E03	HQP015828	NM_002827	PTPN1
QG034-01	E04	HQP015908	NM_002838	PTPRC
QG034-01	E05	HQP020528	NM_175077	SLA2
QG034-01	E06	HQP054006	NM_005900	SMAD1
QG034-01	E07	HQP054007	NM_005901	SMAD2
QG034-01	E08	HQP010960	NM_005902	SMAD3
QG034-01	E09	HQP010961	NM_005359	SMAD4
QG034-01	E10	HQP054008	NM_005903	SMAD5
QG034-01	E11	HQP021399	NM_003745	SOCS1
QG034-01	E12	HQP021602	NM_003877	SOCS2
QG034-01	F01	HQP021889	NM_003955	SOCS3
QG034-01	F02	HQP002181	NM_080867	SOCS4
QG034-01	F03	HQP054032	NM_144949	SOCS5
QG034-01	F04	HQP017640	NM_138473	SP1
QG034-01	F05	HQP017663	NM_003120	SPI1
QG034-01	F06	HQP017696	NM_005417	SRC
QG034-01	F07	HQP019637	NM_003473	STAM
QG034-01	F08	HQP017764	NM_007315	STAT1
QG034-01	F09	HQP017766	NM_005419	STAT2
QG034-01	F10	HQP017767	NM_003150	STAT3
QG034-01	F11	HQP017770	NM_003151	STAT4
QG034-01	F12	HQP017771	NM_003152	STAT5A
QG034-01	G01	HQP017774	NM_012448	STAT5B
QG034-01	G02	HQP017775	NM_003153	STAT6
QG034-01	G03	HQP018340	NM_003331	TYK2
QG034-01	G04	HQP018570	NM_003403	YY1
QG034-01	G05	HQP009026	NM_000194	HPRT1
QG034-01	G06	HQP009653	NM_152872	FAS
QG034-01	G07	HQP009675	NM_175767	IL6ST
QG034-01	G08	HQP015909	NM_080921	PTPRC
QG034-01	G09	HQP017769	NM_213662	STAT3
QG034-01	G10	HQP000623	NM_005194	CEBPB
QG034-01	G11	HQP012081	NM_020530	OSM
QG034-01	G12	HQP000334	NM_005861	STUB1
QG034-01	H01	HGDC		
QG034-01	H02	HGDC		
QG034-01	H03	HQP006940	NM_002046	GAPDH
QG034-01	H04	HQP016381	NM_001101	ACTB

QG034-01	H05	HQP015171	NM_004048	B2M
QG034-01	H06	HQP006171	NM_012423	RPL13A
QG034-01	H07	HQP009026	NM_000194	HPRT1
QG034-01	H08	HQP054253	NR_003286	RN18S1
QG034-01	H09	RT		
QG034-01	H10	RT		
QG034-01	H11	PCR		
QG034-01	H12	PCR		

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